

WHAT IS CLAIMED IS:

1 1. A miter saw comprising:
2 a base;
3 an arm assembly having a fixed end pivotally attached to the base, a
4 free distal end forming a handle spaced outwardly therefrom and a central region
5 therebetween provided with a rotary spindle supporting a cutting disc;
6 wherein the handle has a transverse oriented elongate grip portion
7 sized for a user's fingers to wrap thereabout and a palm pad portion extending
8 outwardly from the grip portion for a distance sufficient to underlie the heel portion
9 of the palm of the user's hand so that as the user lowers the handle towards the base
10 to cause the cutting disc to engage a work piece, the palm pad portion transmits
11 downward force from the user's hand to the handle thereby minimizing torque on the
12 user's wrist.

1 2. The miter saw of claim 1 wherein the elongate grip portion further
2 comprises a lock-out switch extending transversely to the left of the grip portion
3 adjacent the user's thumb and a trigger switch mounted on the grip portion extending
4 inwardly from the grip portion adjacent a user's index finger.

1 3. The miter saw of claim 1 wherein the palm pad portion further
2 comprises a soft elastomeric pad overlying a relatively rigid structural pad member.

1 4. The miter saw of claim 1 wherein the arm extends along an arm
2 axis which is generally perpendicular to the rotary spindle when the arm is viewed
3 in plan view in a lowered position.

1 5. The miter saw of claim 4 wherein the arm includes a rotatable joint
2 enabling the orientation of the handle to be varied about the arm axis and fixed at a
3 position selected by a user.

1 6. The miter saw of claim 5 wherein the rotatable joint has sufficient
2 travel to enable the elongate grip portion to be moved between a horizontal position

3 and a position rotated at least 30° counter-clockwise about the arm axis therefrom
4 measured when the arm is lowered and the rotary spindle is generally horizontal.

1 7. The miter saw of claim 4 wherein the handle has a fore and aft
2 length measured along the arm axis of between 3" and 4.5".

1 8. The miter saw of claim 7 wherein the handle has a maximum
2 vertical thickness where the handle is in a lowered horizontal orientation of between
3 1.5" and 2.5".

1 9. The miter saw of claim 8 wherein the elongate grip portion further
2 comprises a lock-out switch extending transversely to the left of the grip portion
3 adjacent the user's thumb and a trigger switch mounted on the grip portion extending
4 inwardly from the grip portion adjacent a user's index finger.

1 10. A miter saw comprising:
2 a base; and
3 an arm assembly having a fixed end pivotally attached to the base, a
4 free distal end forming a handle spaced outwardly therefrom and a central region
5 therebetween provided with a rotary spindle supporting a cutting disc, said handle
6 including a grip portion, connected to said arm central region via a rotatable joint
7 to permit rotation of said handle about a common pivot axis; said rotatable joint
8 having a locking mechanism cooperating with the arm central region for permitting
9 selective handle rotation about said pivot axis and for maintaining a selected
10 orientation of said handle portion relative to said central region during a cutting
11 operation of the miter saw.

1 11. The miter saw of claim 10 wherein the handle is rotatably
2 adjustable between at least 0° and 30° from horizontal measured when the arm is
3 lowered and the rotary spindle is horizontal.

1 12. The miter saw of claim 10 wherein the locking mechanism
2 comprises an elongate bolt spanning the rotatable joint between the handle and the

3 arm, and a user engagable locking handle cooperating with the bolt to axially clamp
4 the handle and arm together at a user selected orientation.

1 13. A miter saw comprising:
2 a base; and
3 an arm assembly having a fixed end pivotally attached to the base, a
4 free distal end forming a handle spaced outwardly therefrom, a central region
5 therebetween provided with a rotary spindle supporting a cutting disc; said handle
6 being connected to said central region via a rotatable joint to permit the rotation of
7 said handle, about a longitudinal axis therethrough;
8 wherein the locking mechanism comprises an elongate bolt spanning
9 the rotatable joint between the handle and the arm, and a user engagable locking
10 handle cooperating with the bolt to axially clamp the handle and arm together at a
11 user selected orientation.

1 14. The miter saw of claim 13 wherein said rotatable joint comprising
2 indicia and a corresponding alignment configuration to provide a visual indication
3 to the amount of handle rotation of said second handle portion about said central
4 longitudinal axis.

1 15. The miter saw of claim 13 wherein the handle is provided with
2 palm pad portion having comprises a soft elastomeric pad overlying a relatively rigid
3 structural member.

1 16. The miter saw of claim 13 wherein the handle has a maximum
2 vertical thickness when the handle is in a lowered horizontal orientation of between
3 1.5" and 2.5".

1 17. The miter saw of claim 13 wherein the handle has a fore and aft
2 length measured along the arm axis of between 3" and 4.5".

1 18. The miter saw of claim 17 wherein the handle has a maximum
2 vertical thickness where the handle is in a lowered horizontal orientation of between
3 1.5" and 2.5".

1 19. The miter saw of claim 10 wherein the pivotal attachment of the
2 arm to the base is adjustable about a vertical and a horizontal axis in order to enable
3 a user to make a compound miter cut.

1 20. The miter saw of claim 19 wherein the handle is rotatable to the
2 same extent that the arm is adjustable about the horizontal axis so as to enable the
3 handle to be maintained in a horizontal orientation during a compound miter cut.